

## **WHAT IS CLAIMED IS:**

1. A device, comprising:  
a base;  
a metal or metal oxide cladding coated on the base;  
a reservoir defined by the base and the cladding, wherein the reservoir has an opening,  
and wherein the largest dimension of the opening is less than about 200 nm.
2. The device of claim 1, wherein the reservoir comprises a volume removed from the base inside the cladding.
3. The device of claim 1, further comprising a material disposed within the reservoir.
4. The device of claim 3, wherein the material disposed within the reservoir is an organic material.
5. The device of claim 3, wherein the material disposed within the reservoir is silicon or germanium.
6. The device of claim 1, wherein the cladding is gold.
7. The device of claim 1, wherein the largest dimension of the opening is less than about 100 nm.
8. The device of claim 7, wherein the largest dimension of the opening is about 60 nm or less.
9. The device of claim 1, further comprising a position control apparatus attached to the base.

10. The device of claim 9, wherein the position control apparatus further comprises comprises a piezoelectric component.
11. The device of claim 9, wherein the position control apparatus further comprises an atomic force microscope apparatus.
12. The device of claim 9, wherein the position control apparatus further comprises a near-field scanning optical microscope apparatus.
13. The device of claim 9, further comprising an energy application apparatus coupled to the base.
14. The device of claim 13, wherein the base comprises an optical fiber, and the energy application apparatus comprises a light source optically connected to the optical fiber.
15. A method of manufacturing a device, comprising:  
obtaining a base having a tip;  
coating the tip of the base with a cladding material;  
removing a portion of the base from under the cladding material to create a reservoir,  
wherein the reservoir has an opening with a largest diameter of about 200 nm or less.
16. The method of claim 15, wherein the base is obtained by pulling an optical fiber.
17. The method of claim 15, wherein the cladding material is a metal.
18. The method of claim 15, wherein the cladding material is a metal oxide.
19. The method of claim 15, wherein the opening has a largest diameter of about 100 nm or less.

20. The method of claim 15, wherein the opening has a largest diameter of about 60 nm or less.
21. The method of claim 15, wherein the portion of the base is removed by etching.
22. A method of depositing a material, comprising:
  - obtaining a base including a reservoir having an opening with a largest dimension less than about 200 nm, wherein a material is disposed within the reservoir, and wherein the reservoir is defined by a part of the base and a cladding on the base;
  - positioning the opening in the reservoir adjacent to a substrate;
  - applying energy to the material such that some of the material is expelled through the opening and deposited on the substrate.
23. The method of claim 22, wherein the base comprises an optical fiber, and the applied energy is light applied to the organic material through the optical fiber.
24. The method of claim 22, wherein the applied energy is heat.
25. The method of claim 22, wherein the material is an organic material.
26. The method of claim 22, wherein the material is silicon or germanium.
27. The method of claim 22, wherein the material is deposited in a pattern having features with a resolution of less than about 5 nm.
28. The method of claim 22, wherein the opening is positioned using an atomic force microscope technique, and the base acts as an atomic force microscope tip.
29. The method of claim 22, wherein the opening is positioned using a near-field scanning optical microscope technique, and the base is used to transmit light for use in the near-field scanning optical microscope technique.

30. A method of fabricating a device, comprising:  
obtaining a substrate having a material disposed thereon;  
using a position control apparatus to position a base adjacent to the material;  
removing the material adjacent to the base by applying energy through the base.
31. The method of claim 30, wherein the base is covered with a cladding.
32. The method of claim 30, wherein the position control apparatus is an atomic force microscope technique, and the base acts as an atomic force microscope tip.
33. The method of claim 31, wherein the position control apparatus is a near field scanning optical microscope, and the base is used to transmit light for use in the near-field scanning optical microscope.